

# **432 MHz AND ABOVE EME NEWS**

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## **EME NETS**

14.345 KHz at 1600 Z SAT/SUN

- NET CONTL: JOE, K1RQG (207-469-3492), E-MAIL: [Joe, K1RQG](mailto:Joe@K1RQG)
- EME STANDINGS: JIM STARKEY, W0KJY, 3845 CAPITOL DRIVE, FT. COLLINS, CO 80526, (970) 226-0669)
- THE NL WEB VERSION IS PRODUCED BY W6/PA0ZN AND AVAILABLE AT: [432 MHz AND ABOVE NEWSLETTERS.](http://432MHzAndAboveNewsletters.com)

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## **CONDITIONS**

I am afraid that the May SW will not be remembered as especially great. A combination of factors combined to reduce activity: poor WX in many places, the Mothers Day holiday in the USA, and just the "let down" following the "high" of the REF/DUBUS Contest. Conditions on 432 were not that great too, although not as bad

as last month. There were some bright spots: JA4BLC and ZS6AXT connected for a new 13 cm distance record, and new activity on 6 and 3 cm. In June besides the regular SW, look for activity during the ARRL's June VHF QSO Party (14-16 June). Unlike Eur contests, EME contacts are valid contest QSOs. The contest exchange is simply your grid square (short form).

### **DL3EAG**

Stephan writes -- I could not be QRV during the May SW as I was away on holidays until 11 May. I re-arranged my proposed skeds with K5JL, VE1ALQ, 7M2PDT and JS3SIM. I had success with and VE1ALQ and K5JL on 03 May, (just before the German VHF/UHF contest), both were (O/O), but nothing was heard from 7M2PDT and JS3SIM on 04 May.

### **DL4MEA**

Guenter's 70 cm equipment is working well now, and he is available for skeds on Tuesday thru Thursday evenings between 1600 and 2100. DL4MEA's station is 6 x 33 el DJ9BV OPT-70 11.5 lambda yagis with el and horiz pol, 2 x MGF1302 (DJ9BV design) LNA and a 2 x 4CX250 (K2RIW design) PA feeding 30 m of 1/2" Cellflex cable. His locator is JN58jd (60 km west of Munich). Guenter's e-mail address is [Guenther](#) or on the WEB at [DL4MEA's WEB Site](#)

### **EA6ADW**

Peter worked on 1296 in May I5MPK (random) and W4OP on sked. His other skeds produced NIL copy. His station currently is on 432 a 5.5 m dish with horiz pol, 1500 w PA (with .5 dB cable loss) and MGF1302 0.3 dB NF LNA; on 1296 a 5.5 m dish with circ or lin hor/vert pol, 1000 w PA (with 1 dB cable loss) and .25 dB NF FHX35 cavity LNA; and on 2304 a 5.5 m dish with circ pol, 150 w PA ( with 1.6 dB cable loss) and .5 dB NF NE42484 LNA. Peter notes that several stations have said that they are awaiting QSLs from him, but he has already sent cards including photos for everyone of his QSOs. Peter suspects that the Spanish post may be the problem. He asks stations needing his QSL to re-send him cards as he has many cards missing. Peter can now be reached by e-mail at [Peter, EA6ADW](#)

### **G3LTF**

Peter has little this month -- The WX on the SW was very windy both days, and it was too risky to unlock the dish. I have now the 13 cm EME system going again. With about 30 to 40 w at the feed, which is a VE4MA type, my echoes are at present 1.5 dB above noise in 500 Hz. I see about 0.3 dB of Moon noise. I can listen on 2304 and 2320, but can ONLY transmit on 2320. My Xverter is arranged so that if I listen on, say 2304.1, then I TX 16 MHz above, on 2320.1. I ran tests with ZS6AXT on 16/17 May and heard him with good copy both

nights, about 4/5 dB over noise in 500 Hz. Unfortunately he could not hear me on 2320, although I was hearing weak echoes. On the 17th I copied I6PNN with good signals, about 2 dB louder than Ivo. Both signals were within 5 kHz of the expected frequency. The 2nd night I was able to acquire the moon with 100% cloud cover. My main problem is the TX and associated de-tuning which causes the power to fall off. I am fitting a circulator which should solve this problem. At present I really need a visible moon to work 13 cm properly due to dish drive backlash. I will be QRV in June and hope for the best!

### **JA4BLC**

Yoshiro was at the annual JA EME meeting in Tsuyama City on 10/11 May -- 15 people from JA3 and JA4 districts gathered, including one young ham of 16 years, JL4WSJ, who is interested in EME along with his father JA4LJB. Also present were JH3EAO, JR4AEP, JR4BRS, JA4CMZ, JF3HUC and JS3SIM. I was very disappointed to find my call sign missing from the ARRL EME Contest results in May QST. I sent in my logs very soon after the contest via e-mail, but did not receive any confirmation from the ARRL. My score should be just below the line of JA9BOH in the single op- multi band section. [I will check with the ARRL. E-mail should be OK. I also remember sending in my logs via e-mail, and had a similar result!] On 3 May, Hiroshi JA7BMB called me to tell that he had finished his dish and PA for 2424. We tried and got one-way success immediately. His PA was in the shack for this test. He moved his amplifier closer to the feed, and we tried again on 15 May. This time we achieved a (449/569) QSO for initial #15 on 2424.1. This contact is our 4th band success (144, 432, 1296 and 2424). On 12 May, I worked ZS6AXT (539/559) #14 on 2304/2424 for a new continent and new DXCC. I believe this QSO was also the 1st between Africa and Asia on 13 cm, and a new terrestrial distant record of about 13,000 km for the 13 cm band, (ref. QST page 88, April 1997).

### **JA7BMB**

Hiroshi has came back on EME, on 13 cm, after a long absence. His last EME activity was a near-miss during SK6WM's big dish tests on 1296 in 1988. Hiroshi has a 5 m dish covered with 8 mm mesh and a W2IMU circular feed. His PA consists of 2 parallel water cooled VE4MA amps which produce 120 w into a 2 dB loss feedline. He has a HEMT preamp, and receives 13 dB of sun noise on 2424 MHz. Hiroshi can hear his own echoes S2, and on 15 May worked JA4BLC for his initial 13 cm QSO. He has not finished improvements to his old 2304 MHz converter that was used in 1988. He plans to re-tune this converter for 2304/2424 cross frequency operation during the June SW, and is interested in skeds.

### **JA9BOH**

Kimio sends the following list of e-mail addresses for JA stations who are active (or have been active) on 70 cm and above EME:

- [JA0HVL](#)
- [JA0RWF](#)
- [JH1EFA](#)
- [JH1OFX](#)
- [JH1WLK](#)
- [JH1XUJ](#)
- [JJ1NNJ](#)
- [JA2TY](#)
- [JA2JRJ](#)
- [JA2KRW](#)
- [JA3IAF](#)
- [JF3HUC](#)
- [JH3EAO](#)
- [JO3RNL](#)
- [JS3SIM](#)
- [JA4BLC](#)
- [JA4LKB](#)
- [JH4LJV](#)
- [JR4AEP](#)
- [JA5OVU](#)
- [JH5LUZ](#)
- [JA6AHB](#)
- [JA8ERE](#)
- [JR9NWC](#)
- [7M2PDT](#)

#### **K4QI**

Rusty says: May was not a very productive month, mostly due to windy conditions. On 432 on 9 May I worked LX1DB and then got caught in a violent thunder storm. I thought I might lose my dish, but finally got it secured. During the SW on Saturday, it was also too windy to get on. I was on for a while during the Asian window and worked the following on 70 cm: JA5OVU, JH4JLV, K1FO, JA9BOH, JA2TY, and JJ1NNJ. I read with interest K1FO's comments on EME contest scoring. I think when all the smoke finally settles, we will get down to grid squares for the exchange, (or signal report + grid square). This may make things a little more difficult for marginal stations, but then everyone will develop a grid square "cheat sheet".

#### **LA8LF**

Anders was QRV on 13 cm in May and worked with only 15 w at the feed on 14 May OE9ERC (579/339), OZ4MM (549/O) and OE9XXI (559/449), and on 16 May ZS6AXT (539/M). Ivo told me he copied (O) towards the end of our QSO.

#### **NP4B**

Bob is starting to put Puerto Rico on the 1296 EME map with a polar mounted 15' dish, circular feed and 60 w PA. During May he added initials with W2UHI #3, K2DH #4 and K2UYH #5, and QSO'd OE9XXI a 2nd time, who was using linear pol at the time. [Bob is not real strong but definitely workable.]

#### **UR5LX**

Sergej found an absence of activity during the May SW. He heard nil in all his skeds. On 11 May he logged KL7HFQ for initial #318 and WAS 38. Sergej suggests that all NL skeds should be considered preliminary and confirmed by e-mail. [The main problem with this proposal is that many stations do not have e-mail. The best insurance for successful skeds is to request skeds with stations you know to be QRV and INTERESTED. Unfortunately some skeds requests are for stations who are in active, not ready or do not subscribe to the NL.]

#### **VE4MA**

Barry worked LX1DB on 5.7 GHz in May. Nil was copied from K9BCT on 23 cm. He notes that he does not have a JA window from his QTH. Barry is working on a couple of 23 cm cavities using a different design for 7289s, as well as with the GI7B Russian tube. He looked over another dish to replace his current 12 ft dish. The new dish is 10', but good to 14 GHz. [Marginal stations looking for VE4MA on 70 and 23 cm are advised to sked now. He will probably be QRT below 5 GHz for a while. He plans to change dishes after the next SW.]

#### **W6/SM0PYP**

Paul reports -- I am working on my 10 GHz system. I made a Chaparral feed horn with 3 choke rings and linear polarization, and will make a 2nd Chaparral feed with circ pol. 1st tests indicated 12 dB of sun noise with a 2 dB NF LNA and my 10' dish (f/d 0.29). I did not optimize the feed position yet. I am also working on a better LNA and tracking system using F1EHN software and interface board.

#### **ZX6AXT**

Ivo reports -- The biggest event in May was working on 12 May JA4BLC (559/539) on 13 cm for initial #16. This was a "cross-band" QSO, 2304/2424. A very easy and short QSO which is the 1st Africa- Asia and

1st JA-ZS QSO on this band. Then on 16 May I worked LA8LF (M/539) #17 - Anders had only 15 w and despite this was quite an easy QSO. We had a sked, but I called CQ about 30 minutes earlier, and he came back to me. So it is not really necessary to have QRO on this band. I worked on 3 May on 1296 EA6ADW, OK1KIR and SM3AKW, on 10 May on 2304 OH2AXH, on 11 May on 1296 DJ9YW, SM3AKW, HB9SV, WB5LUA, W4OP (439/539) for initial #121, SM2CEW and I5MPK. Skeds did not work out. I QSO'd W4OP on random and nothing was heard from K9BCT and K9ZZH. Heard on 23 cm were OE9ERC, G3LQR and HB9BBD. Skeds on 13 cm with G3LTF, again "cross-band" 2304/2320 did not result in QSO. Peter heard me. I just could not find him. I would like to try with somebody else who can transmit on 2320 to check whether I am receiving there. After this sked, I worked I6PNN. After my 13 cm QSO with JA4BLC, I switched to 23 cm and forgot to change the antenna relay control; the LNA took full power without the relay isolation for some 15 sec, then gave up. The isolation of the W2IMU feedhorn was not good enough. I hope to have it repaired for the next SW. This was the 1st time that this has happened to me! I found that with the offset feed on 13 cm (about 5 deg), I have the horizontal beamwidth narrower than the vertical one. I will probably try to raise and lower the feedhorns a bit to get plus/minus 2.5 deg offsets on both 23 and 13 cm. Can anybody give some advice on this? A few of us are building the DJ9BV automatic NF meter. The commercial price for the Noisecom diodes are quite high. Does anybody have some other way how to obtain these noise diodes for a better price? Any suggestions would be appreciated.

## **K2UYH**

I was not as active as I would have liked during the May SW. I arrived home from work on Friday too late for any worthwhile operation during my Asian Moon window. I did QSO on 10 May on 70 cm at 1917 UR5LX (569/559), 1927 I5CTE (549/449), 1938 KL7HFQ (449/439), 1954 DL4KG (449/449), 2021 partial DK8VS? (QRZ/-), 2022 G3HUL (559/549) and 2036 DK3FB (449/449). We were not QRV on the 11th because of conflicts in time with Mothers Day [a US holiday] family activities. We did get on 1296 on 16 May to work at 1947 K2DH (55/55) on SSB and 0300 NP4B (449/579) for initial #148 and DXCC 34 in an e-mail arranged sked.

## **NETNEWS**

**KA0RYT** did not get on for the May SW due to bad WX, but did work earlier W7QX and G4FUF for new one.

**VE1ALQ** worked DL3EAG in May, but now has dish drive problems and is off the moon until he fixes it.

**W2UHI** reports his new hydraulic dish control system is working well. Frank's standings on 23 cm are up to initial #92, DXCC 23 and states 22.

**W1ZX** did not work UA4API on sked.

**F5SDD** is a new club station on 432 with 8 x 26 el BV yagis and 600 W. They will be QRV on 31 May and 1 June on 432.060 starting at 0700.

**IK6EIW** was at an EME meeting, and so could not make his sked with NU7Z.

**CT1DMK** worked AA5C on 3 cm during the SW. Luis is concentrating on 10 GHz and will only QRV be on this band in the near future.

**HP3XUG** has been very busy and not too active. He expects to be QRV on 70 cm during the June SW. Louis may have to move in the near future.

**KD4LT** has his new dish (22') for 23 cm mounted and is now working on the control interface. On 70 cm with his 32 ft dish, Scott has moved his feed in and gained 1 dB. He is back to one set of dual dipoles.

**K2DH** worked NP4B on 23 cm. Dave's goal is to work initial #100 in 1997.

**W0KJY** had a good contact with KX1DB [on 23 cm?], but missed DJ9YW due to US Mothers Day activities. Jim's goal is to get initial #200 on 70 cm.

**LX1DB** worked on 6 cm VE4MA (449) for his initial QSO - tracking was right on, and WB5LUA #2 in May. Willie is also working 10 GHz. He hopes to be ready before June. He also added LA8LF on 13 cm in May.

**JA9BOH** is not QRV on 23 cm. He is working with JR9NWC, who has a 4 m dish, on 1296 operation from NWC=92s shack.

**KB3PD** was out of town during the May SW but will be back on 70 cm for the June SW.

**K7XW** will not be QRV until the 1st part of July.

**W7QX** worked JA2KRW on 21 May, and is interested in skeds for 432.=20

**WA8ZWG** has increased his power on 13 cm by 3 dB and is looking for skeds. He is also available for skeds on 70 and 23 cm. Tom can be reached via e-mail at [TomWA8ZWG](mailto:TomWA8ZWG@earthlink.net)



**K5JL** had an initial with DL3EAG on 70 cm in May.

**K9BCT** was on his 23 cm VE4MA sked but heard nil.

**G4FUF** had to cancel all May SW skeds.

**DK3WG** needs QSL cards from N6OVP, WA8WZG, K5GW, N4UK, WI7Z and WB6IMC.

**EA2LU** is not presently QRV on 70 or 23 cm, but maybe active again in 1 or 2 months with the call sign EA2AVY.

**EA2LY** is now in new grid IN93. He was in grid IN80, but for the 1997 DUBUS Contest he was in IN93... so any QSOs are initials if he was previously worked before 1996. When in IN80 he may have used EA4LY or EA2LY/EA4.

**ON4UV** in near QRV on 3 cm but is being frustrated by a sick TWTA.

**KL7HFQ** QSO=92d UR5LX. He will be around all of June, but QRT for July.

**W4TJ** is the new call of AA4TJ. Bill will not be too active for a while. He hopes to be back on 23 cm in a month or so.

**W3XS** is the new call of K3EAV.

**NU7Z** plans to be on 70 cm for the ARRL June VHF contest with 4 yagis and 1 kw from CN87.

**NA4N**'s e-mail address is [NA4N](#)

**WA4NJP** is looking for specs on the Eimac YU-338.

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## FOR SALE

looking for 3 170' runs of 7/8" andrews LDF hardline for his new station.

**KB2AH** has a **full line of cavity amps and 1, 2, 4 and 6 tube ring amps, lin/circular feed horns and LNAs for 432 and 1296... And recently he has added mounting blocks for K1FO yagis.** For full details see: [Tom, KB2AH's 1296 WEB Page](#) for price e-mail: [Price Info](#) or phone 908- 223-5067, FAX 908-223-0901 (24 hrs) or voice 908-223-8124.



K5JL knows where there are **some cooling units for water cooling**, pretty big, about the size of 2 draw file cabinet with 1 HP motor, Teel Pump, quick connects, etc. for sale - looks new.

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## TECHNICAL

JA4BLC has contributed the following method for easing the construction of cavity type LNAs with the short lead lengths found on most low noise FETs now in production -- I have made many cavity-type preamplifiers over the years. The latest HEMT devices can make fabrication frustrating. Today;s HEMTs give super low NFs, but are only available with very short leads, only 2 mm long. The original GaAs FETs came with relatively long leads. For example, the MGF1400 in 1980 had 6.7 mm long leads, while the latest HEMT, NE32984D has only 1.7 mm leads. In the process of preamp construction, I have often failed to properly install these short-lead HEMTs, and as result lost HEMTs and disc capacitors. As a solution I made up small PC boards for pre-mounting the HEMTs. I can then easily install these boards without difficulty. You can see the idea in the diagrams - [near the end of this NL]. The disc capacitors can be placed between the boards and the cavity as shown in the diagrams, or they can alternately be placed on the board between the device source leads and the board. I hope this idea will help old friends who are suffering from short-lead HEMTs.

[Diagram1](#)

[Diagram2](#)

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## FINAL

I received a question concerning the order in which signal reports appear in the NL. I follow the convention used in the ARRL Log Books and I believe in most other publication; shown 1st is the RST "sent" and shown 2nd is the RST "received" by the reporting station.

I have also received a number of comments relating to the EME Contest rule changes suggested last month. There appears no real consensus. Some N.A. stations definitely favor the additions of US states used as multipliers. Stations in the Southern hemisphere would prefer contest dates at low declination. I have concluded there can never be rules that are totally equitable. The important thing is the challenge. This is what attracted all of us to Moonbounce in the 1st place. If the rules don't favor you, be they the rules of Physics or rules made up by people, this just makes winning that much sweeter! So get to work on that bigger antenna, lower noise amplifier, etc. These

efforts will make contests that much more interesting and exciting for everyone. Also how about dxpeditions? Anyone doing something this summer?

Please keep the news and technical reports coming. More technical=20 material is needed! E-mail is the preferred way to submit information. I will be looking for you all off the Moon in the June SW... 70 cm the 1st day, 23 cm the 2nd, and on 3 cm again soon.

73, Al - K2UYH

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[Skeds for June 7/8 1997](#)

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This information was obtained from [Scott, KD4LT](#)

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For Comments or corrections: [Rein, W6/PA0ZN](#)

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